Better Buildings Residential Network Peer Exchange Call Series: *Expanding Your Reach: Creating Sustainable Energy Communities*

June 8, 2017

Call Slides and Discussion Summary

Agenda

- Agenda Review and Ground Rules
- Opening Polls
- Brief Residential Network Overview and Upcoming Call Schedule
- Featured Speakers
  - **Samantha Sojka,** Associate Program Administrator – Community Outreach, Eversource **& Sheri Borrelli**, Senior Business Development Professional, United Illuminating Company *(Network Member)*
  - **Dara Reiff**, Nonprofit Program Manager, Elevate Energy *(Network Member)*
  - **Tyler Bailey**, Research Analyst, Local Policy, American Council for an Energy-Efficient Economy (ACEEE) *(Network Member)*
- Discussion
  - Is your program considering developing community-based campaigns for energy efficiency? What are the expected benefits from this type of initiatives?
  - Please share any lessons learned and best practices from your experience with community campaigns for energy efficiency. What results did these initiatives yield?
  - Are there challenges in rolling out energy community campaigns, and how can they be addressed?
  - Other questions/issues/lessons learned related to community-based campaigns?
- Closing Poll

Better Buildings Residential Network

Better Buildings Residential Network: Connects energy efficiency programs and partners to share best practices and learn from one another to increase the number of homes that are energy efficient.

Membership: Open to organizations committed to accelerating the pace of home energy upgrades.

Benefits:

- Peer Exchange Calls 4x/month
- Tools, templates, & resources
- Recognition in media, materials
- Speaking opportunities
- Updates on latest trends
- Voluntary member initiatives
- Residential Program Solution Center guided tours

Commitment: Provide DOE with annual number of residential upgrades, and information about associated benefits.

For more information or to join, email bbresidentialnetwork@ee.doe.gov, *or go to* energy.gov/eere/bbrn *and click Join*

Best Practices: Eversource & United Illuminating Company

U.S. DEPARTMENT OF ENERGY

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Empowering you to make smart energy choices

Clean Energy Communities

Expanding Your Reach: Creating Sustainable Energy Communities

Sheri Borrelli
The United Illuminating Company
Clean Energy Communities

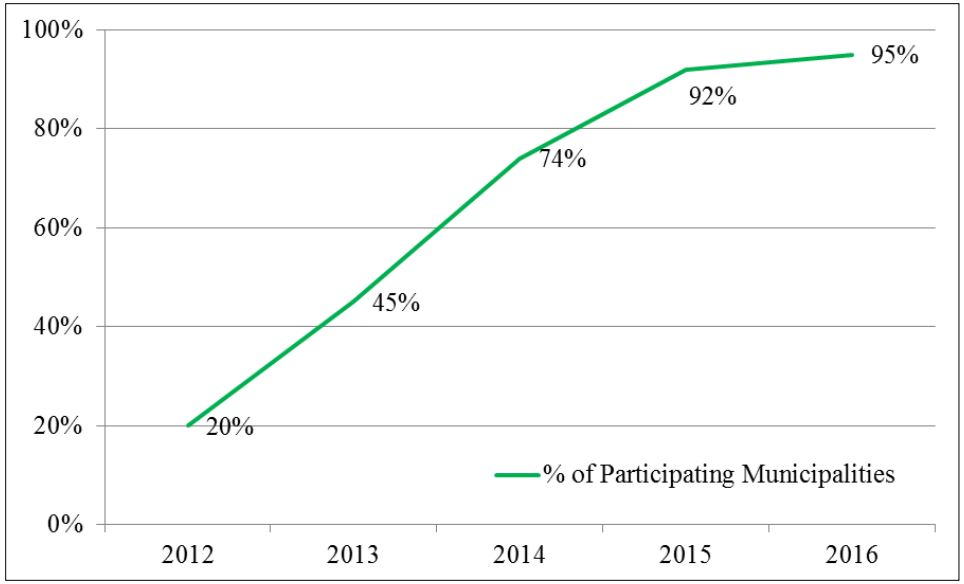
Samantha Sojka
Eversource
Clean Energy Communities

Energize Connecticut

- Energize Connecticut is the state's branding initiative to help consumers save money and use clean, affordable energy

- A partnership of the Energy Efficiency Fund, Connecticut Green Bank, Department of Energy and Environmental Protection (DEEP) and local electric and gas utilities

Clean Energy Communities



Connecticut has 169 towns and cities

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Engaging Our Communities

Engage
Educate
Empower

CLEAN ENERGY COMMUNITIES MUNICIPAL PLEDGE

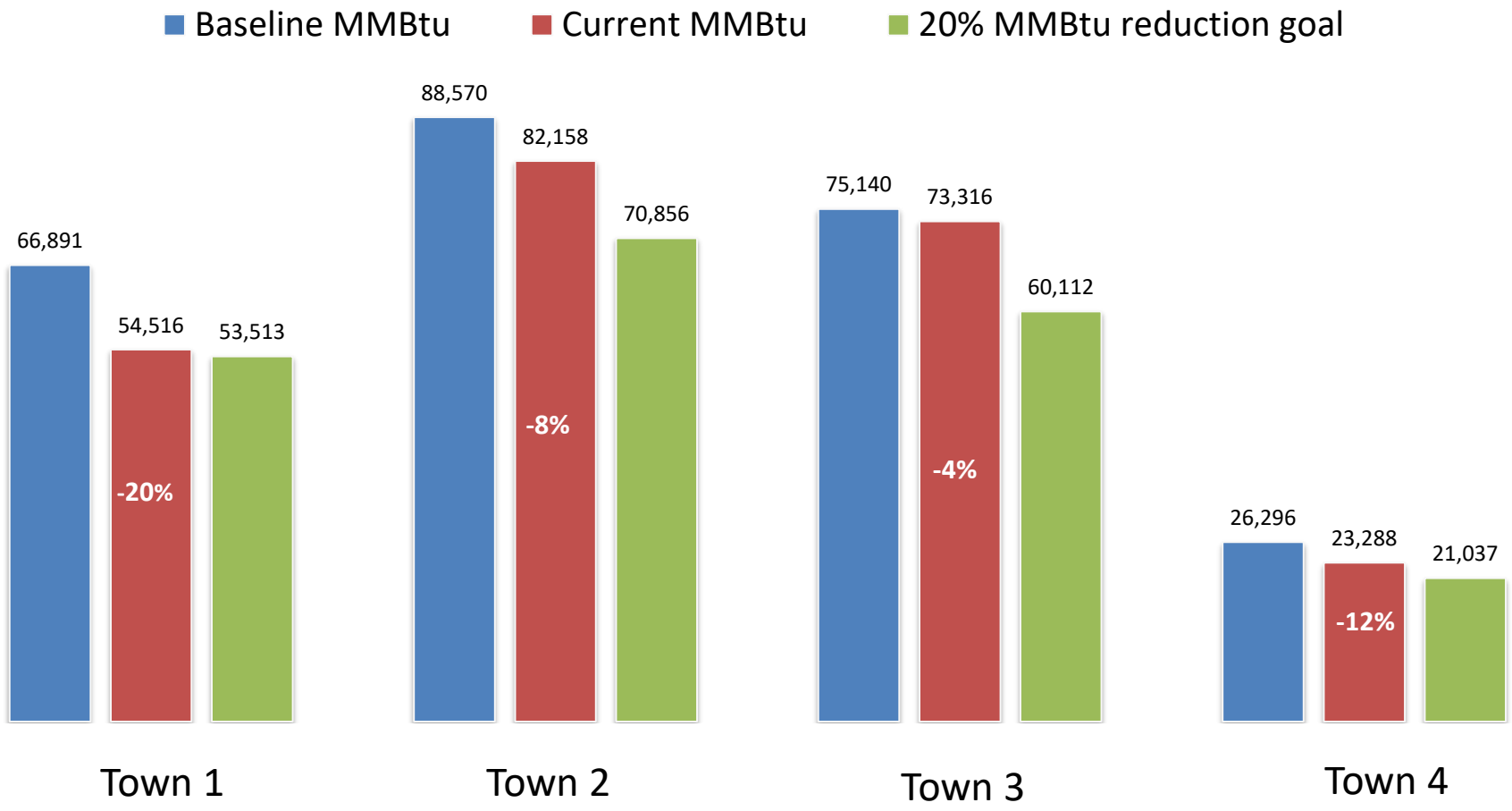
The Clean Energy Communities program is an initiative funded by both the Clean Energy Finance and Investment Authority (CEFIA-formerly known as the Connecticut Clean Energy Fund) and the Connecticut Energy Efficiency Fund. CEFIA and the Energy Efficiency Fund develop programs which collectively seek to have Connecticut cities and towns both reduce energy use and increase support for clean, renewable energy for municipal facilities. The Energy Efficiency Fund programs are administered by The Connecticut Light and Power Company, The United Illuminating Company, Yankee Gas Services Company, The Southern Connecticut Gas Company, and/or Connecticut Natural Gas Corporation (collectively, "the Companies")

By applying currently available energy efficiency and clean, renewable energy technologies the City of Hartford can save money, create a healthier environment and strengthen local economies; and **accordingly, the City of Hartford makes the following Clean Energy Communities Municipal Pledge:**

1. The City of Hartford pledges to reduce its municipal building energy consumption by 20% by 2018. Building energy consumption shall be determined by benchmarking municipal building energy consumption to a baseline fiscal year. The City of Hartford can elect from the following fiscal years to determine its energy baseline year: 2008-2009, 2009-2010, 2010-2011, or 2011-2012.
   a. The City of Hartford will seek to reduce its municipal building energy consumption for municipal facilities by at least 20% by 2018. The schedule follows:
      i. Fiscal Year 2012-2013: 5% Reduction
      ii. Fiscal Year 2013-2014: 8% Reduction
      iii. Fiscal Year 2014-2015: 11% Reduction
      iv. Fiscal Year 2015-2016: 14% Reduction
      v. Fiscal Year 2016-2017: 17% Reduction
      vi. Fiscal Year 2017-2018: 20% Reduction
   b. The City of Hartford will work with the Companies, contractors or other entities to benchmark all of its municipal buildings (including board of education buildings) to determine all municipal building energy usage.
   c. Beginning July 1, 2015, the City of Hartford agrees to provide documentation of its municipal building energy consumption on an annual basis by the end of the first quarter of the following fiscal year.
   d. The City of Hartford pledges to create its own Municipal Action Plan (MAP) to determine its path in reducing its energy consumption. The City of Hartford may satisfy this requirement by submitting a pre-existing municipal energy plan, sustainability plan, climate change action plan or similar document.
   e. There is no penalty if the City of Hartford fails to meet the reduction amounts set forth in the schedule above. However if these reduction targets are not met starting July 1, 2015, the City of Hartford will not be eligible to receive Bright Ideas Grants from the Connecticut Energy Efficiency Fund and Companies under the Clean Energy Communities program.

2. The City of Hartford pledges to purchase 20% of its municipal building electricity from clean, renewable energy sources by 2018.
   a. The City of Hartford will seek to make a voluntary purchase of at least 20% of the electricity for municipal facilities from clean, renewable energy sources by annual CEC program requirements. The schedule follows:
      i. Fiscal Year 2012-2013: 15% Purchase
      ii. Fiscal Year 2013-2014: 16% Purchase
      iii. Fiscal Year 2014-2015: 17% Purchase
      iv. Fiscal Year 2015-2016: 18% Purchase

Town Energy Reduction Tracking



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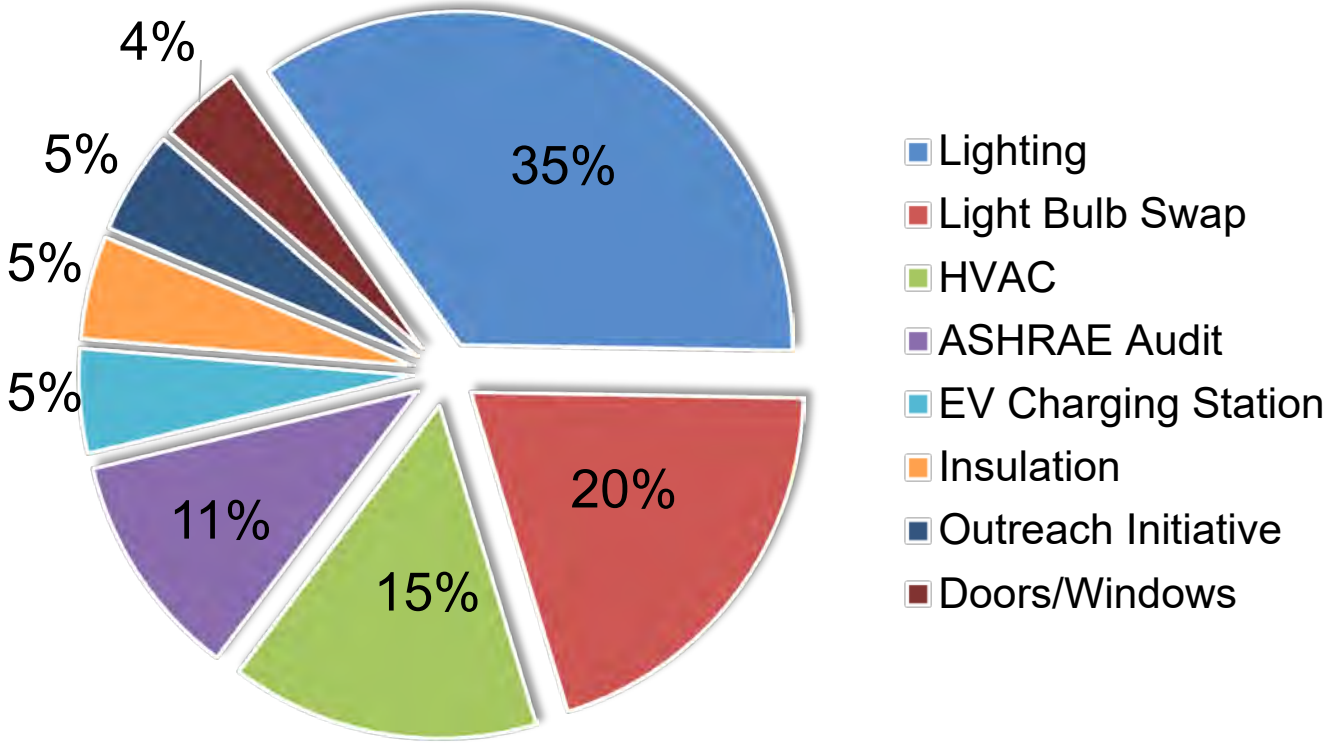
ENERGY STAR® Portfolio Manager®

BIG Rewards Since 2012

- 180 Bright Idea Grants(BIG) earned
- $1.5 million available for energy efficiency projects through CEC BIG Grants



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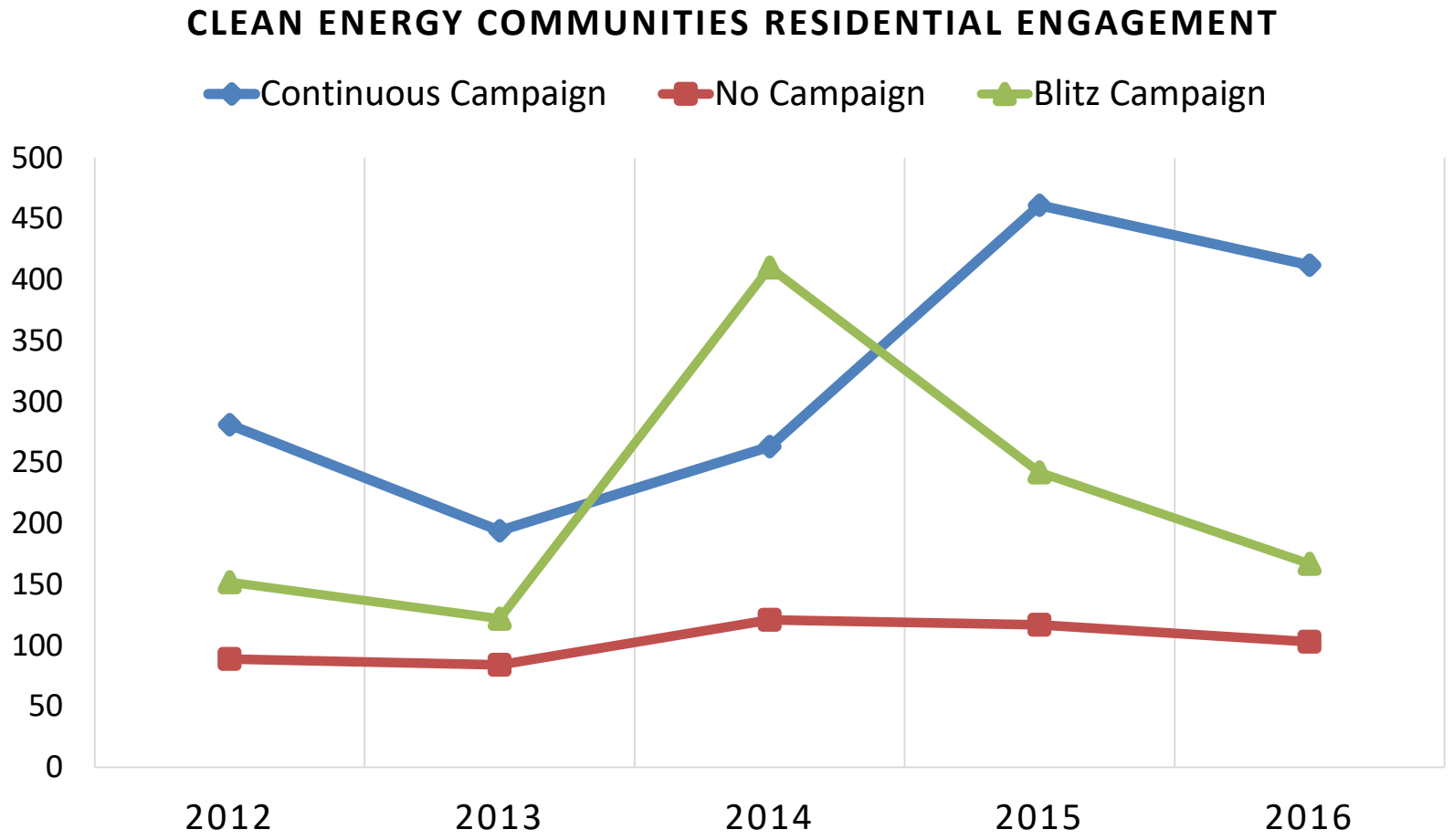
Increase in Program Participation



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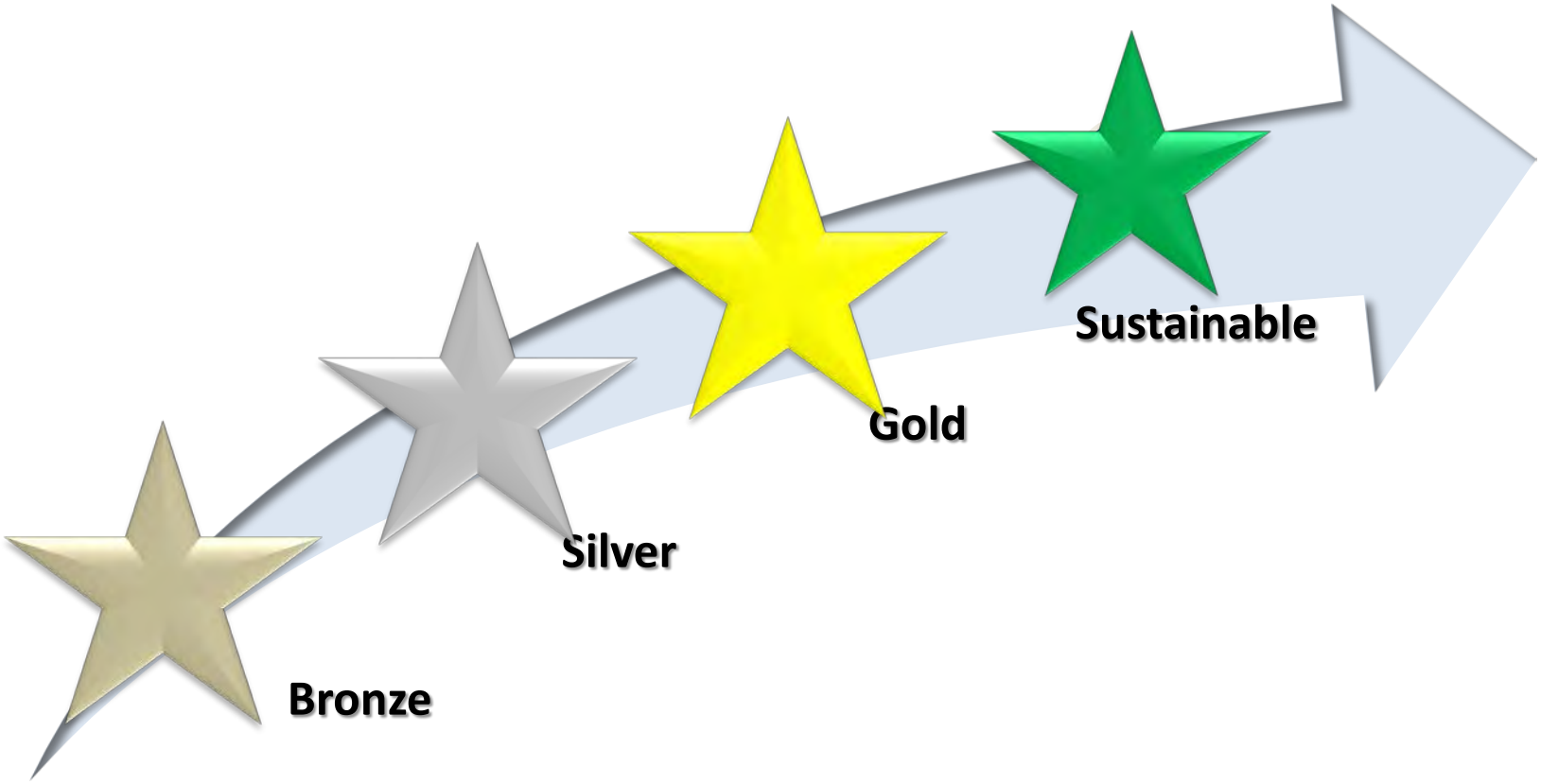
Clean Energy Communities Recognition



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Clean Energy Communities in a Flash

1. Sign pledge
2. Benchmarking energy usage
3. Earn Grants
4. Engage Community
5. Implement Projects
6. Become Sustainable Energy Community

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Empowering you to make smart energy choices

QUESTIONS

THANK YOU

Sheri Borrelli
The United Illuminating Company
Clean Energy Communities

Samantha Sojka
Eversource
Clean Energy Communities

Presentation Highlights: Eversource & United Illuminating Company (1 of 2)

- **Engaging the municipal leaders is the first steps towards more sustainable communities:**
  - As part of the Energize Connecticut program, 95% of Connecticut's towns have pledged to reduce 20% of energy use by 2018.
- **Education and support all the way is needed,** including technical assistance, outreach campaigns, and other guidelines.
  - Besides town leaders, Energize Connecticut engages residents, businesses and a dedicated “Energy Task Force”, which acts as “foot soldiers” in the community.
- **Evaluation and benchmarking helps keep track of progress:**
  - All participating towns in the Energize Connecticut use Energy star Portfolio Manager (PM).
  - Towns are allowed to go back 5 years to create the baseline.
  - Currently Connecticut communities achieved up to 42% energy reductions.

Presentation Highlights: Eversource & United Illuminating Company (2 of 2)

- **Evaluation can be leveraged to transform current barriers into quick wins:**
  - Energize Connecticut connects the towns with engineers to audit their worst performing buildings and identify upgrade opportunities.
- **Rewarding champions shows recognition.** Energize Connecticut uses:
  - earning points, which towns can redeem for other energy efficiency projects
  - a “bronze to sustainable” scale, which motivates towns to climb the “energy efficiency ladder”
- **Funding:** Energize Connecticut is ratepayer funded. The initiative originates from a Connecticut State legislative approach to promote more municipal energy efficiency.

Best Practices: Elevate Energy

U.S. DEPARTMENT OF ENERGY

Expanding Your Reach: Creating Sustainable Energy Communities

Better Buildings – Thursday, June 8, 2017

ELEVATE ENERGY

Smarter energy use for all

Our Mission

We promote smarter energy use for all.

We give people the resources they need to make informed energy choices.

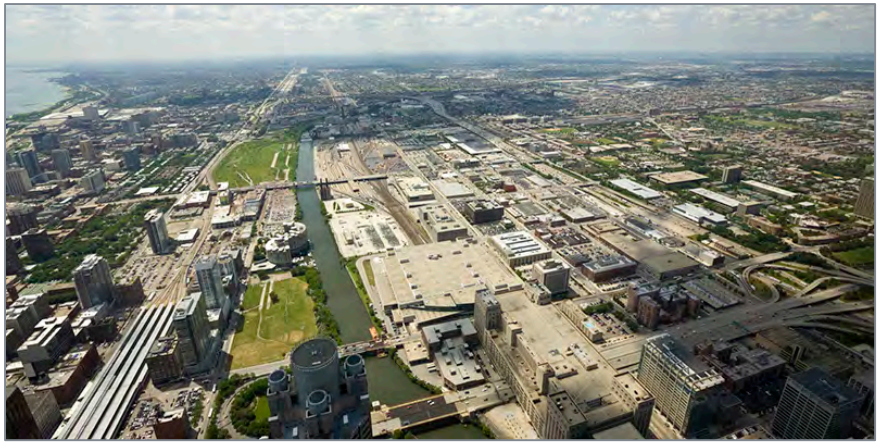
We design and implement efficiency programs that lower costs, and protect the environment.

We ensure the benefits of energy efficiency reach those who need them most.

ELEVATE ENERGY
Smarter energy use for all

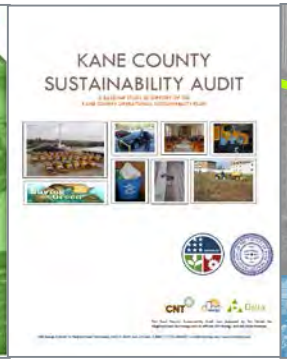
Areas of Focus

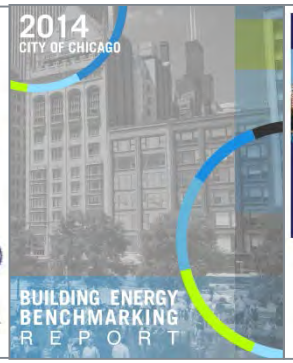
- Smart grid benefits and dynamic electricity pricing in **homes**
- Energy efficient **buildings**
- **Community**-level programs
- Research, policy and innovation

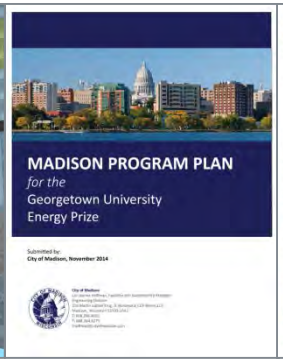


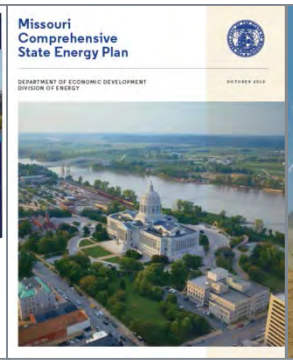
Community Level Programs

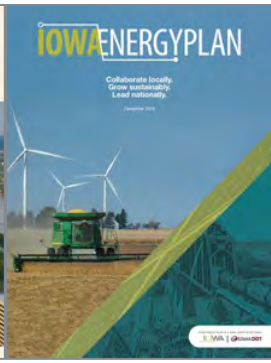
- Energy/Climate/Sustainability Planning
- Energy Benchmarking
- Stakeholder Engagement
- Municipal Energy Use
- Planning into implementation











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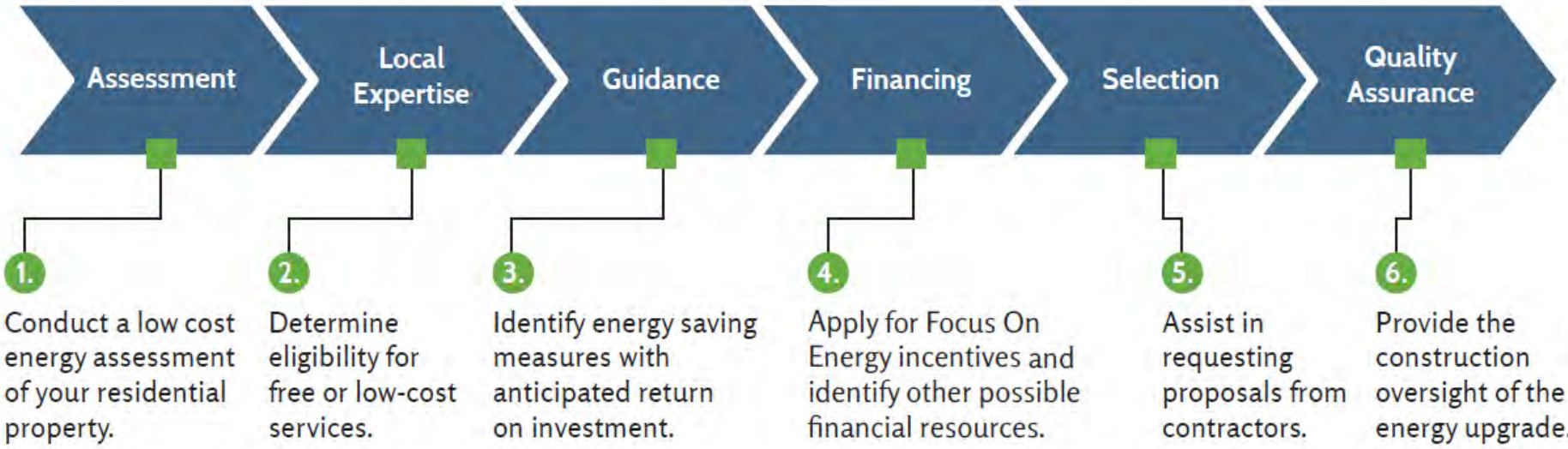
Residential Buildings Approach

- One-stop-shop approach to assist building/homeowners from beginning to end



Energy Efficiency is not a Can of Coke

A Community-Based Approach

- People have questions
- Education = Action
- Science needs to be visual
- Trusted messengers are key

Tactics

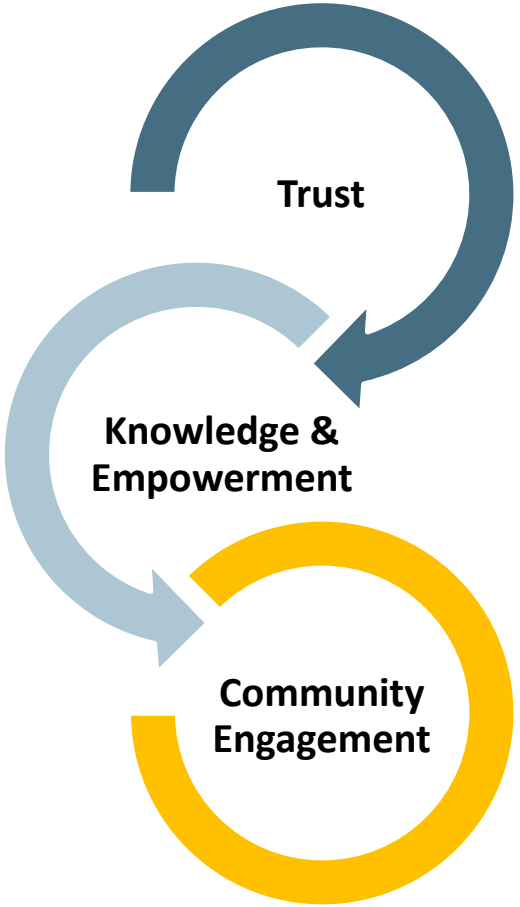
- Tabling, Commercials
  - **<1% Sign-up Rate**
- Community Meetings, Workshops, Lunch & Learns
  - **18% Sign-up Rate**
- House Parties
  - **74% Sign-up Rate**
- 1:1 Meetings
- Volunteers

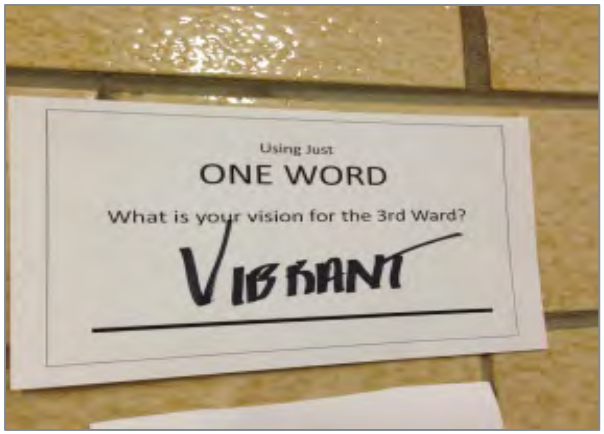
Growing Need in Low Income Communities

- Often “environmental justice” communities
- Dealing with poor housing stock, rising costs
- Traditionally left out of the energy conversation
- Not the focus of existing utility programs for efficiency and renewables

Evolving Relationship to Communities

1. Align city goals with utility actions
2. Low-income communities as key accounts
3. “Place-based power”





Thank you!

Dara Reiff
Nonprofit Program Manager

Anna Markowski
Community Projects Manager

ElevateEnergy.org

@elevate_energy

Facebook/ElevateEnergyNP

LinkedIn

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Smarter energy use for all

Presentation Highlights: Elevate Energy

- **Energy efficiency is not a can of Coke**: need to break through the clutter of information around energy efficiency to get messages across.
- **Stakeholder engagement is the first step in understanding the community's motivations:**
  - Elevate Energy's microgrid project in the Bronzeville Community revealed that key community needs are jobs, inclusion, attraction of local businesses, and educational opportunities.
- **Community-based approaches help drive more engaging interactions.**
- **House parties are a great example of education in action:** Elevate Energy invites contractors to perform energy audits at house parties, to show what is searched for in an audit, and respond to any questions.
- **Messages with which people resonate vary by audience**:
  - For communities: financial savings, comfort, house safety
  - For contractors: retention, less complaints, less turnovers

Best Practices: American Council for an Energy-Efficient Economy (ACEEE)

U.S. DEPARTMENT OF ENERGY

How Energy Efficiency Benefits Community Resilience

Tyler Bailey

Expanding Your Reach: Creating Sustainable Energy Communities

June 8, 2017

ACEEE
American Council for an Energy-Efficient Economy

The American Council for an Energy-Efficient Economy is a nonprofit 501(c)(3) founded in 1980. We act as a catalyst to advance energy efficiency policies, programs, technologies, investments, & behaviors.

Our research explores economic impacts, financing options, behavior changes, program design, and utility planning, as well as US national, state, & local policy.

Our work is made possible by foundation funding, contracts, government grants, and conference revenue.

aceee.org @ACEEEdc

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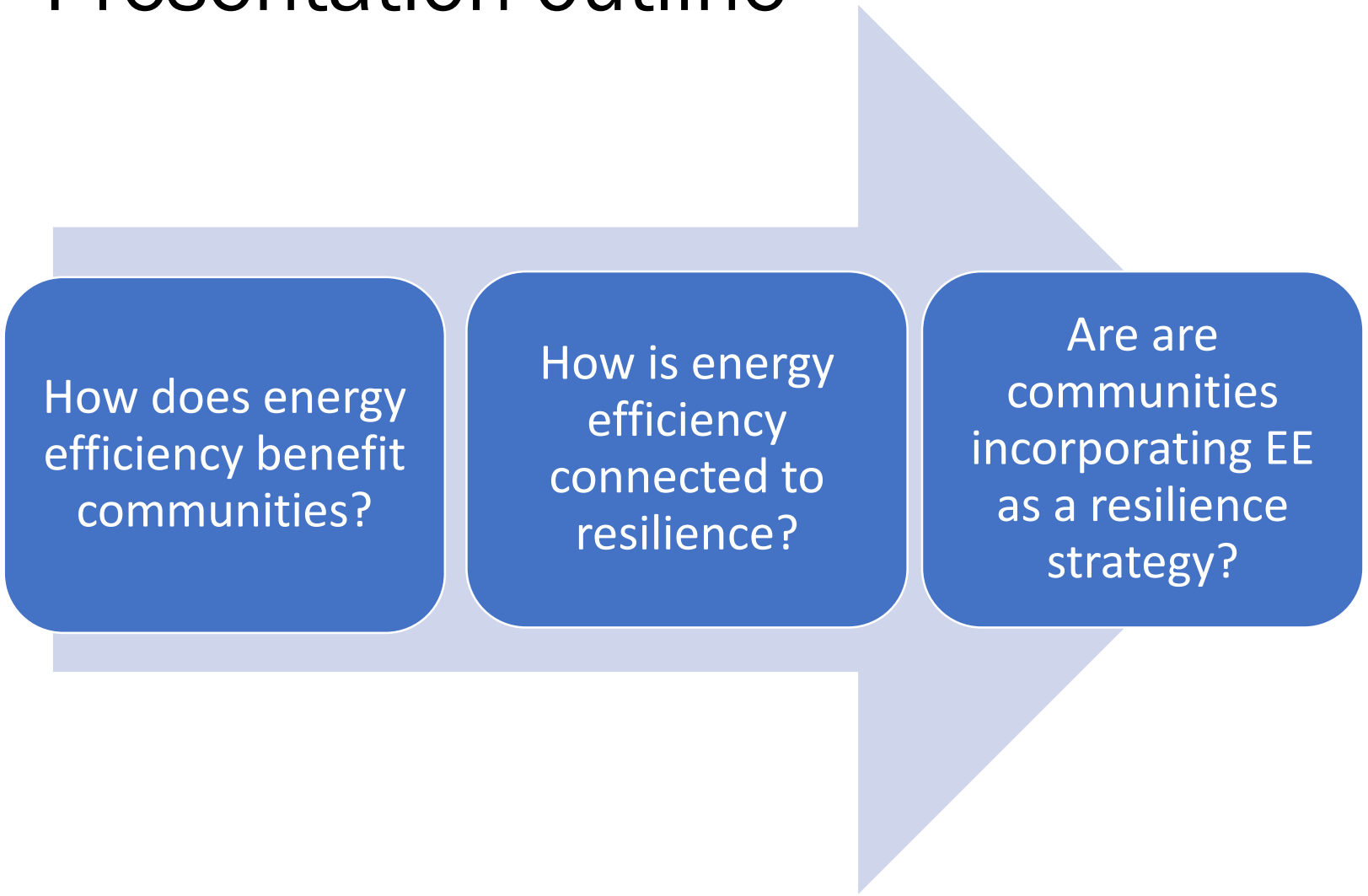
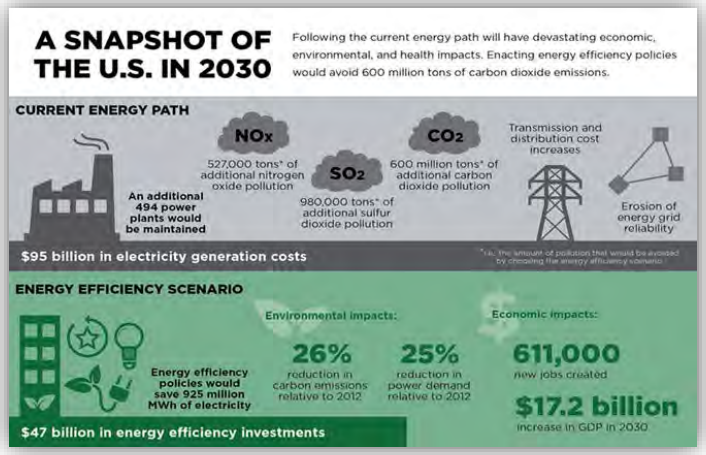
American Council for an Energy-Efficient Economy

Presentation outline

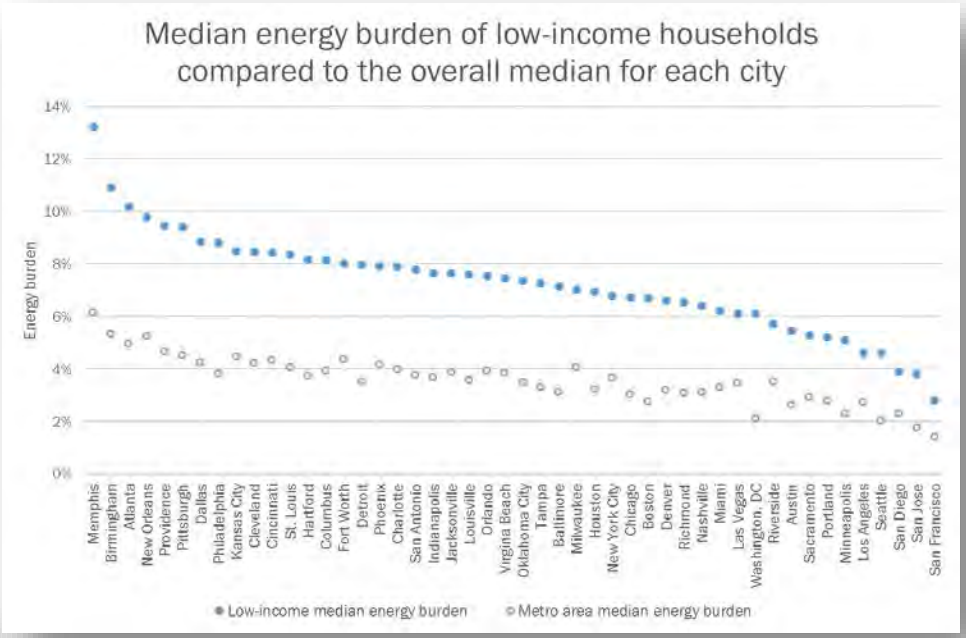


Why energy efficiency?

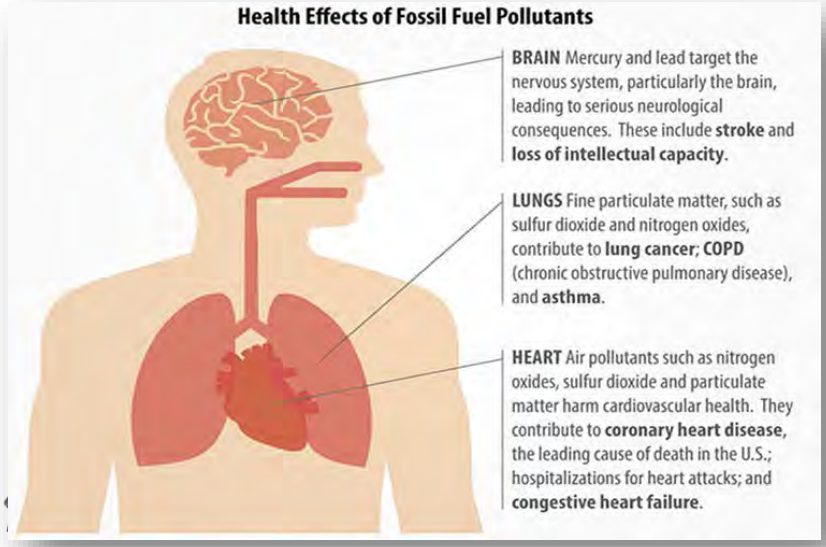
Reduces pollution

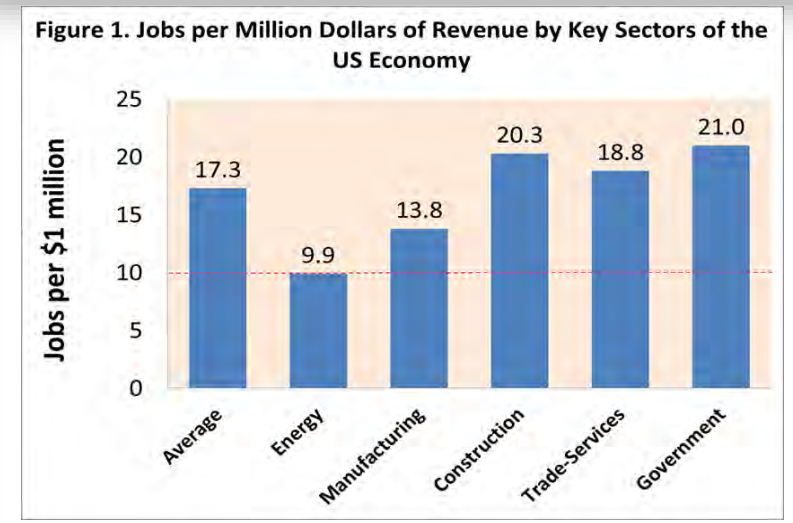


Reduces the energy burden



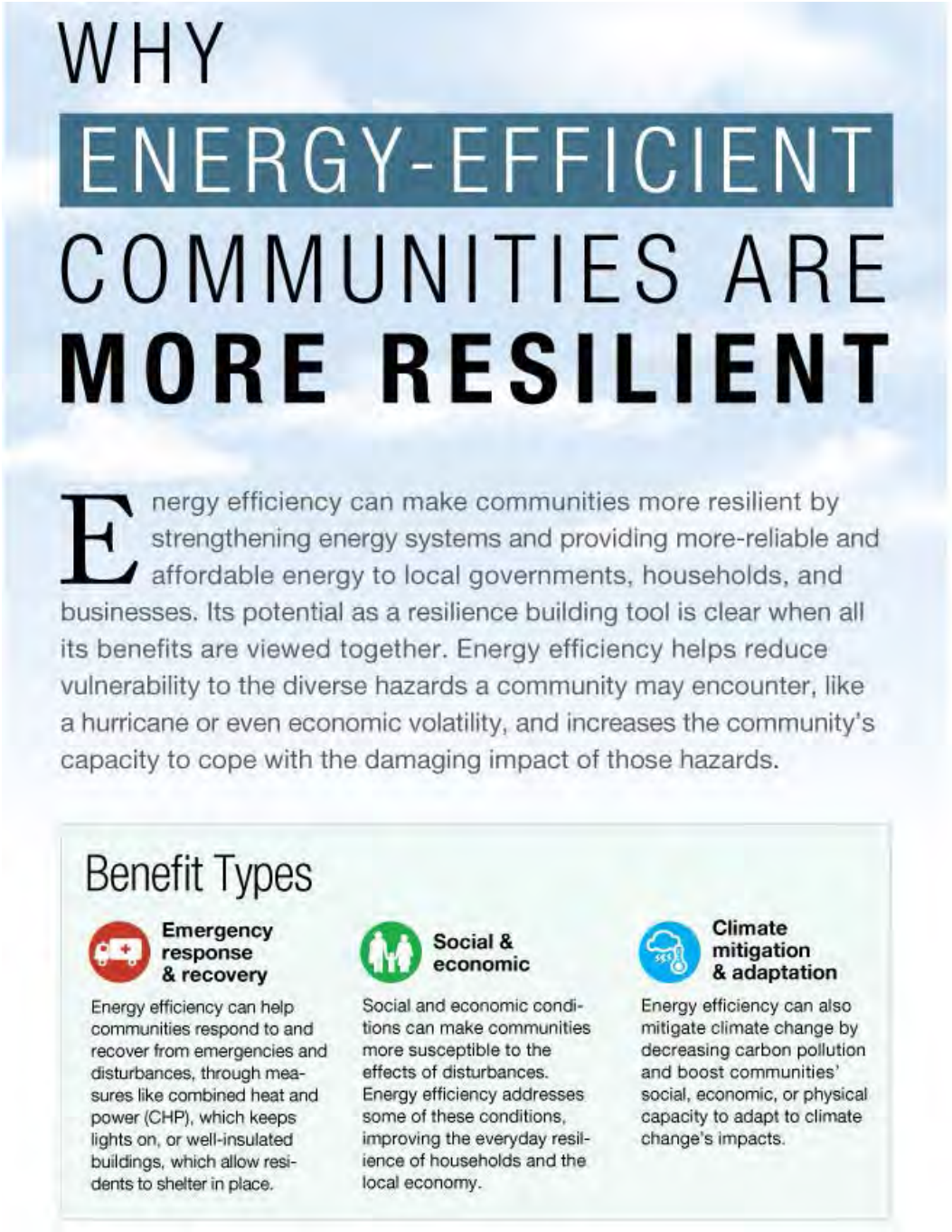
Benefits health





Energy efficiency and community resilience

- Energy efficiency's myriad benefits means it has significant implications for community resilience
- Energy efficiency strengthens energy systems and the communities those energy systems serve
- Opportunity for including efficiency measures in resilience planning processes is significant



http://aceee.org/blog/2015/10/many-ways-energy-efficiency-can-boost

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Resilience benefits of energy efficiency

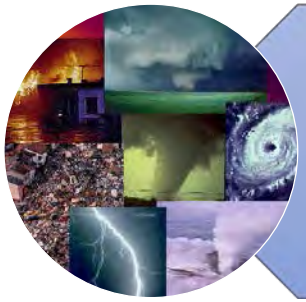
Emergency response & recovery

- Multiple transportation options
- Shelter in place
- Reliable energy supply

Social and economic

- Less energy bill volatility
- Better public health
- More disposable income for other needs

Climate mitigation and adaptation



- Mitigation of climate change
- Cost-effective GHG reduction

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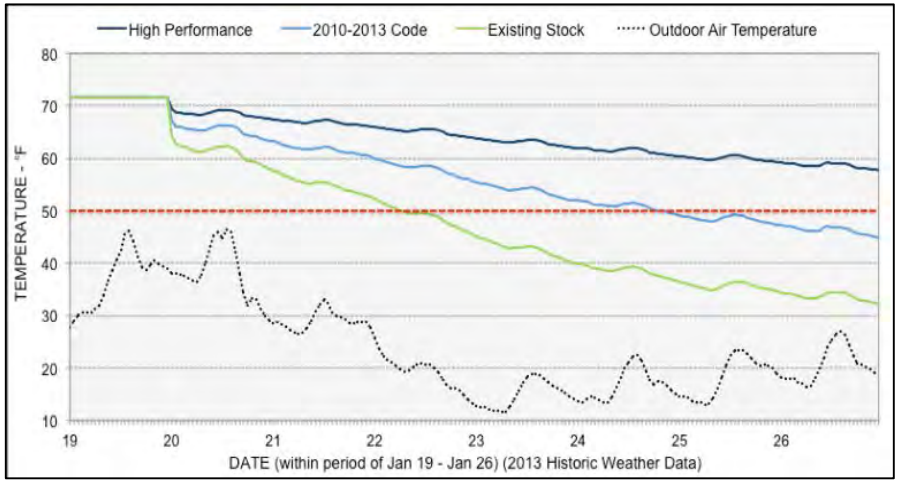
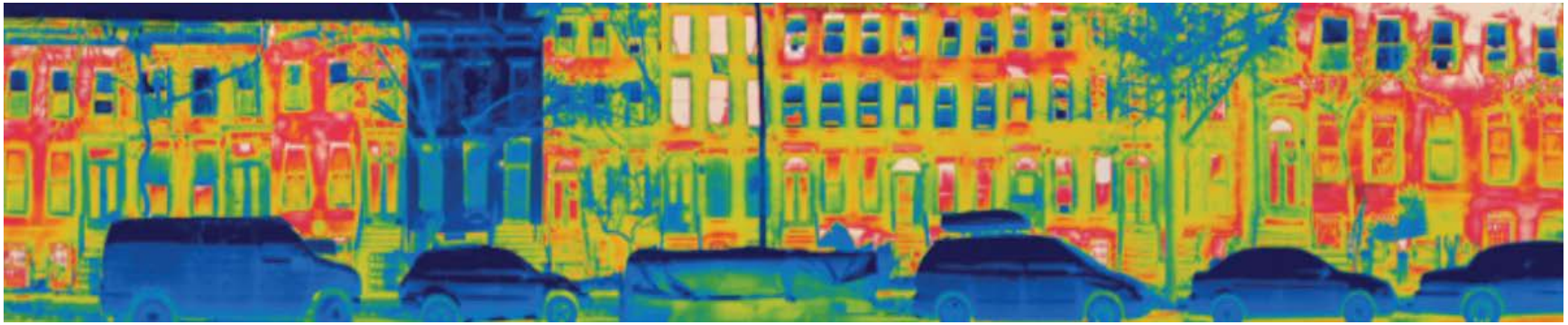
Energy-efficient buildings

- Maintain habitable interior temperatures (*response and recovery*)
- Reduce annual spending (*socioeconomic*)
- Reduce net emissions (*climate change*)

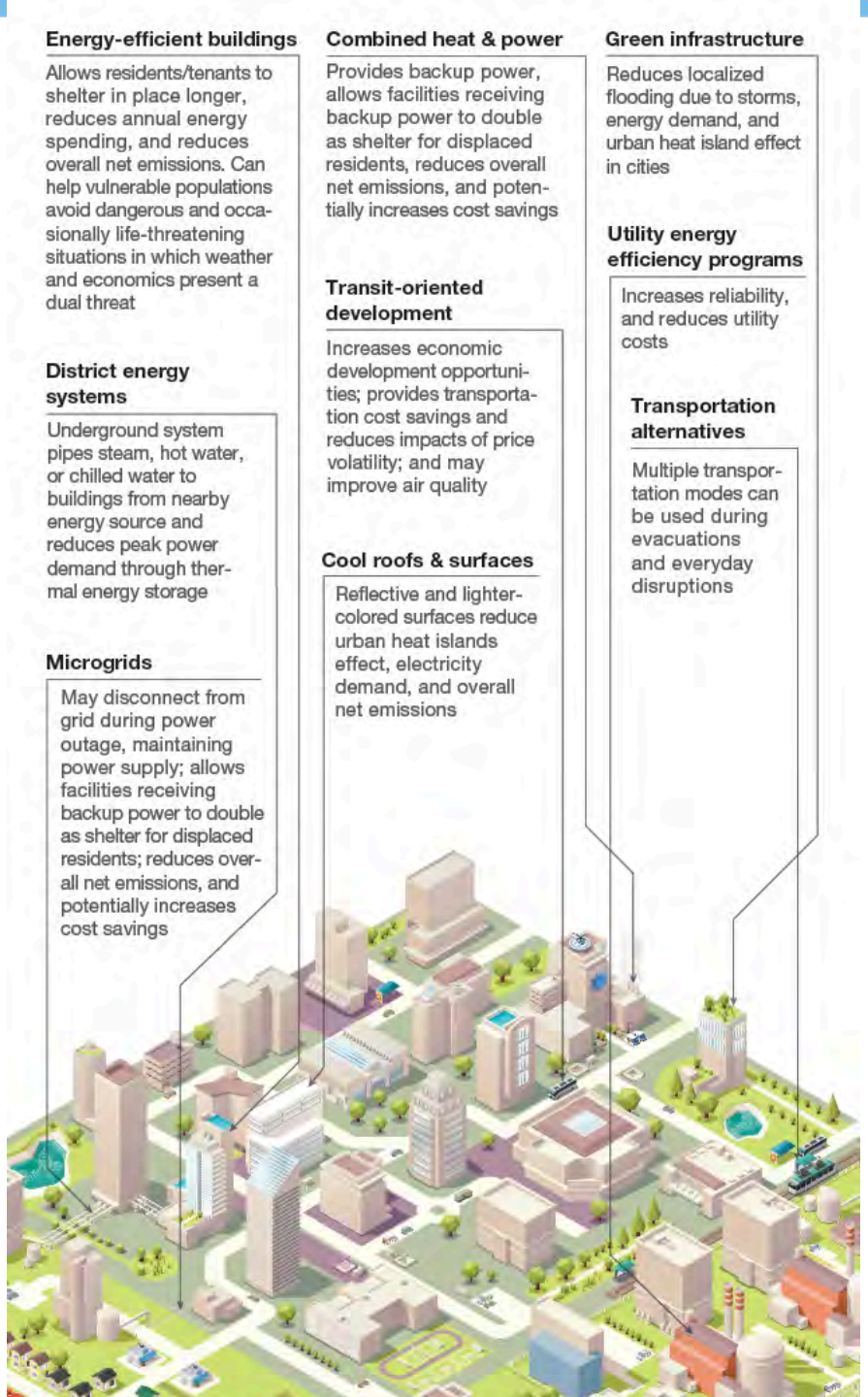


http://aceee.org/files/proceedings/2014/data/papers/1-439.pdf



http://urbangreencouncil.org/babyitscoldinside

Other energy efficiency technologies and activities that increase community resilience



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Is energy efficiency being pursued as a resilience strategy?

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FEATURED ACTION

Launch Downtown Energy Efficiency Challenge

Lead: Downtown Development District
Partners: City of New Orleans, Entergy

ASPIRATION

New Orleans is a national leader among peer cities in reducing energy use and its related environmental impact.

RESILIENCE VALUE

By reducing energy use, New Orleans will reduce operating costs for businesses, reduce the city's impact on the environment, and promote the city as a leader in sustainability and climate adaptation.

Strategy: Reduce energy demand

In the years to come, rising temperatures will lead to higher peak demand. One strategy to accommodate it involves increasing the supply of energy available to the city. However, an equally (or more) effective—and far less expensive—strategy is to manage demand itself, both during peak periods, and more broadly. Programs are already in place to encourage both kinds of demand reduction. The City will continue to advance them, as well as develop new ones.

Initiative 19

Work with utilities and regulators to expand citywide demand response programs

In recent years, Con Edison and the NYISO have built up approximately 500 MW of demand response (DR) capacity to manage the brief periods of peak electrical demand that would otherwise require costly system expansions. The City will call on Con Edison, LIPA, PSC and the NYISO to increase this capacity and will support two strategies to accomplish this goal.

First, to create additional incentives for DR participation, the City will continue to support full implementation of a recent FERC ruling that

DEMONSTRATE THE RETROFIT OF A CITY BLOCK USING ECOBLOCK PRINCIPLES

Description

The EcoBlock project team will work in close collaboration with the owners and residents of a small, older residential neighborhood to retrofit an entire North Oakland block that includes approximately 30 older homes, many subdivided into two to three smaller units. The project will include implementing deep energy efficiency in all homes and shared rooftop solar panel, creating a solar-powered microgrid with smart controls and onsite energy storage that can operate autonomously. Electricity generated on site will be sufficient to power electric vehicle chargers, which may serve as a shared resource for the community. The EcoBlock will drive significant water conservation through rooftop water harvesting and advanced technologies to treat and recycle water onsite. Recycled water will irrigate shared organic fruit and vegetable gardens and landscaping to keep the block lush and mitigate the urban heat-island effect.

The EcoBlock will serve as a prototype, in the hopes that it can be replicated

Conclusions

- Energy efficiency has many benefits that can positively impact a community's resilience.
- Energy efficiency is an effective resilience strategy.
- Some communities are beginning to realize energy efficiency as a resilience strategy.

ACEEE resources

Upcoming

- *Gauging Local Energy Resilience: Capturing the Effect of Energy Supply and Consumption on Community Resilience (White paper)*
- Building resilience measures in single-family homes (Factsheet)

Existing

- *Enhancing Community Resilience through Energy Efficiency (http://aceee.org/research-report/u1508)*
- *The Role of Electric Utility Efficiency Programs in Building Resilience (http://aceee.org/files/proceedings/2016/data/papers/11_366.pdf)*
- *Harnessing Energy Efficiency in Resilience Planning (http://aceee.org/files/proceedings/2016/data/papers/11_368.pdf)*

Thank you!

Tyler Bailey
Research Analyst
ACEEE

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American Council for an Energy-Efficient Economy

Presentation Highlights: ACEEE

- **Energy efficiency is an extremely cost-effective resilient strategy:** non-energy benefits (e.g. reduced energy risk and volatility, increased job creation) have a positive impact on the community's resilience.
- **Key benefits of energy resilience include:**
  - **Better mobility** through more shared transportation and reduced parking
  - **Reduced urban heat island** through cool roofs
  - **Continuous operation even when electricity from the grid is unavailable**: e.g. in the case of hurricane Sandy, a combined heat and power system allowed hospitals to keep their operations running.
- **More cities are beginning to pursue energy efficiency as a resilience strategy:**
  - **New Orleans:** has a holistic resilience strategy released in 2015
  - **New York**: looks to reduce peak demand to increase grid reliability

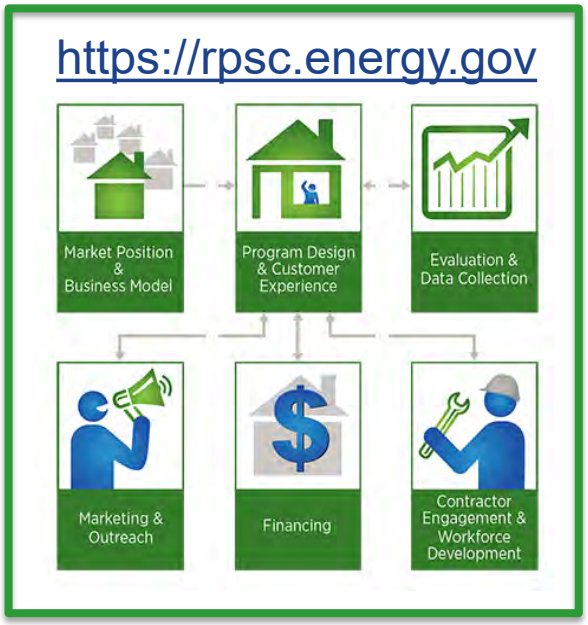
Discussion Highlights

- **Energy efficiency can have broader benefits, especially in low-income communities:**
  - In Bronzeville, Elevate Energy involved the youth as well in the microgrid development project, as a way to invest in its future.
  - Increased mobility also means wider access to jobs, as it helps connect peripherical urban areas with the central city, where most jobs are located.
- **Contractor development is as important as the outreach**: when working with the City of Madison, Elevate Energy had an increased program demand, but realized the contractor pool was insufficient.
- **Off the grid tiny modular houses** could be an alternative to expensive housing and high energy bills.
- **Energy fairs at schools or walking tours of energy efficient homes** are another way to connect with communities.
- **Various software solutions are available to track energy savings,** such as the Energy Star Portfolio Manager and WegoWise.

Related Resources in the Residential Program Solution Center

Explore resources related to creating sustainable energy communities:

- Learn about community-based social marketing and see examples from programs that have used it in this SEE Action presentation.
- Read this case study about the AlabamaWISE program which undertook community-based approaches to enhance home energy efficiency.
- Explore this Better Buildings interview about Michigan's "readiness factor" to understand community characteristics that are beneficial to energy efficiency programs.



- Check out the latest Proven Practices post on Offering a Range of Upgrade Paths.
- The Solution Center is continually updated to support residential energy efficiency programs—**member ideas are wanted**!

Upcoming Seasonal Messaging Opportunities

Now is the time to start planning energy efficiency messaging campaigns for the fall season.

Here are some ideas to get you started. Please let us know what you come up with!

Sept 22 – Dec 20
Fall Season

End of August & September
Back to School

September 10
National Grandparents Day

The Residential Energy Services Network (RESNET)
Poster

U.S. Department of Energy
Article & Video: 5 Back-to-School Resources to Help You Learn About Energy

For related seasonal messaging opportunities, visit the Better Buildings Residential Network website: Fall: Energy Saving Changes with the Season

Join the roofing systems innovation challenge

Join the roofing systems innovation challenge!

Register for the webinar: June 29, 2-3pm ET

Oak Ridge National Lab has partnered with GAF to host a technology challenge on roofing systems. The *call for innovation* is part of the online crowdsourcing site, JUMP, and aims to identify innovation solutions for ensuring energy efficient and durable low-slope roofing systems employing concrete decks.

The challenge is to develop new materials or installation methods that can be employed to modify a typical roofing system with a concrete deck so that the likelihood of having moisture related problems is significantly reduced. **The winner would receive $10K in cash sponsored by GAF and up to $20K in-kind support from ORNL technical scientist.**

Register for the challenge webinar on June 29 from 2-3pm ET to learn more. Ideas will be accepted through Sunday, August 27, 2017.

Peer Exchange Call Series

We hold one Peer Exchange call the first four Thursdays of each month from 1:00-2:30 pm ET

Calls cover a range of topics, including financing & revenue, data & evaluation, business partners, multifamily housing, and marketing & outreach for all stages of program development and implementation

Upcoming calls:

- June 15: Home Improvement Catalyst: HVAC Installations That Deliver
- June 22: Car Talk: Electric Vehicles and Residential Energy Efficiency
- June 29: Community-Based Social Marketing: Using Social Science and Data to Change Behavior
- July 6: No call
- July 13: Resilience and Energy Efficiency in Low-Income Communities
- July 20: Bullseye: The Advantages of Targeted Marketing
- July 27: Making Program Evaluation Work for You

Send call topic ideas to peerexchange@rossstrategic.com

See the Better Buildings Residential Network Program website to register

GET SOCIAL WITH US

Stay engaged and connected with the Better Buildings Residential Network and our partners from the residential and multifamily sectors!

Follow us to plug into the latest Better Buildings news and updates!

Share with us your top stories on how your organization is accelerating energy savings through efficiency upgrades, strategies, and investment!

Better Buildings Twitter with #BBResNet

Better Buildings LinkedIn

We can't wait to hear from you!

U.S. Department of Energy Solar Decathlon

Oct 5-15, 2017 DENVER

- 13 Collegiate teams compete in 10 contests
  - New for 2017: Innovation and Water
- Winning team best blends technology, market potential, design excellence with smart energy solar production and maximum energy and water efficiency.
- Large free public event – showcases best of clean energy technology
- Denver location: new, mixed use smart community on transit line near Denver International Airport
- Sponsorship Opportunities
- Info: www.SolarDecathlon.Gov

Solar Decathlon 2015 Teams in Irvine, Calif.
Credit: Thomas Kelsey/U.S. Department of Energy Solar Decathlon

Addenda: Attendee Information and Poll Results

U.S. DEPARTMENT OF ENERGY

Call Attendees: Network Members

- Advanced Energy
- Alaska Housing Finance Corporation
- American Council for an Energy-Efficient Economy (ACEEE)
- BC Hydro
- BlueGreen Alliance Foundation
- Boulder County
- Center for Sustainable Energy
- City of Kansas City
- CLEAResult
- Elevate Energy
- GoodCents
- High Country Conservation Center
- International Center for Appropriate and Sustainable Technology (ICAST)
- Institute for Market Transformation (IMT)
- Rural Ulster Preservation Company (RUPCO)
- South Burlington Energy Committee
- Southface
- United Illuminating Company
- Vermont Energy Investment Corporation (VEIC)
- Wisconsin Energy Conservation Corporation (WECC)

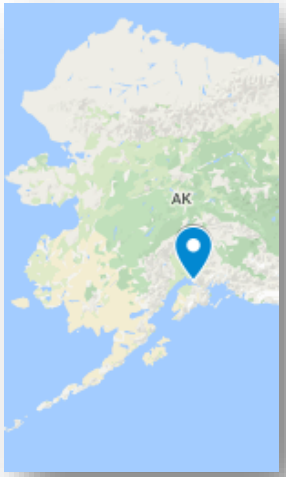
Call Attendees: Non-Members (1 of 2)

- Association for Energy Affordability
- AtSite, Inc.
- U.S. Bureau of Ocean Energy Management
- Canadian Home Builders' Association (CHBA)
- City Green
- City of Asheville
- City of Orlando
- Delaware Department of Natural Resources and Environmental Control (DNREC)
- Donald J. Caunter Architect
- E4TheFuture
- Element 8
- Enbridge Gas Distribution Inc.
- Energy Solutions Professionals
- EnergyWorks
- Eversource
- Franklin Energy
- Green Compass Sustainability
- Heyoka Solutions, LLC
- U.S. Department of Housing and Urban Development
- Hunter Industries, Inc
- ICF International
- ID3A, LLC
- Idaho Power Company

Call Attendees: Non-Members (2 of 2)

- Jofforts Energy
- LEENA Labs
- Lincoln Solarize
- Local 2020
- Massachusetts Department of Energy Resources
- Mercy Housing (MHMG)
- Modular Lifestyles Inc.
- National Fuel Gas Company
- Opinion Dynamics Corporation
- Oregon Department of Energy
- Richmond Region Energy Alliance
- Scalable Strategies
- SEM Energy Group
- Sierra Business Council
- Sim2
- San Joaquin Valley Clean Energy
- Smith & Boucher Engineers
- Southwest Environmental Finance Center (SWEFC)
- Texas Energy Poverty Research Institute (TEPRI)
- The Clark Group LLC

Call Attendee Locations



Opening Poll #1

- Which of the following best describes your organization's experience with community-based approaches for energy efficiency?
  - Very experienced/familiar – ***37%***
  - Some experience/familiarity – ***33%***
  - Limited experience/familiarity – ***23%***
  - No experience/familiarity – ***7%***
  - Not applicable – ***0%***

Closing Poll

- After today's call, what will you do?
  - Seek out additional information on one or more of the ideas – ***67%***
  - Consider implementing one or more of the ideas discussed – ***28%***
  - Other (please explain) – ***5%***
  - Make no changes to your current approach - ***0%***